



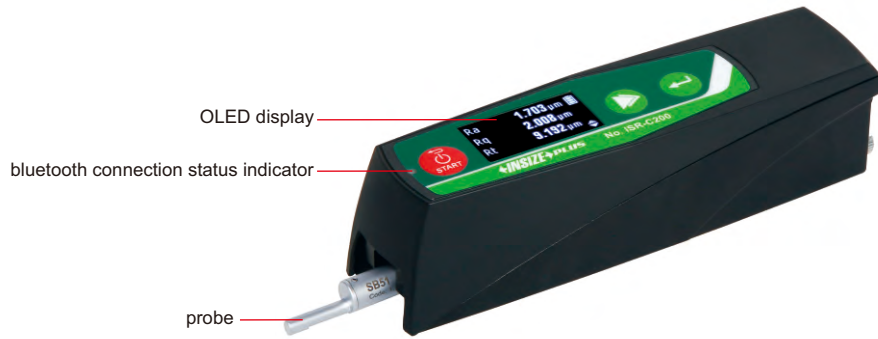
BLUETOOTH

DATA OUTPUT

PROBE CAN BE CHANGED

# ROUGHNESS TESTER (COMPACT TYPE) CODE ISR-C200

INSIZE PLUS



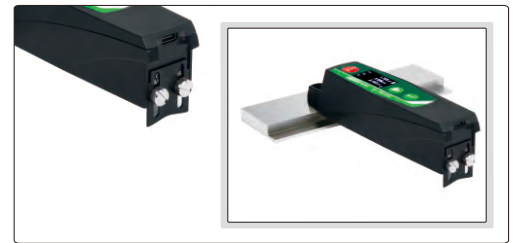
- The product is light, reliable and durable
- 13 roughness parameters
- Can be operated by mobile phones (only Android system) or computers
- Measurement results can be exported in Excel and PDF format
- Memory of 18000 measurements with only parameters or 30 measurements with graph
- Automatic power off



probe can be set at 90°, for transverse measurement



probe cover (included)



adjustable stand (included)

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The software interface displays the following information:

- Connected with ISR-C200
- START button and waveform graph
- ISO 4287 Standard
- Delay: 0 s
- Active code: 0.8 mm
- Cutoff length
- Automatic Return
- Return: 5
- Cutoff number

The results screen shows a table of parameters:

Parameter	Value	Tol.
Ra	3.423 μm	
Rq	3.932 μm	
Rt	13.277 μm	
Rz	13.090 μm	
Rc	12.463 μm	
Rmax	13.277 μm	
RSm	95.4 μm	
RPC item	105/cm	

Below the table are three graphs: a main roughness waveform, an Arden plot, and a Density plot.

The export screen includes fields for:

- Logo
- Description
- Notes
- Operator
- Customer
- Drawing number
- Lot
- Data to print: P, R, Rk
- Charts and tables

measuring software (included), connect to mobile phones via bluetooth (only Android system) to control roughness tester, or connect to computers via USB cable or bluetooth to control roughness tester, display roughness values and curve, results can be exported in Excel and PDF format

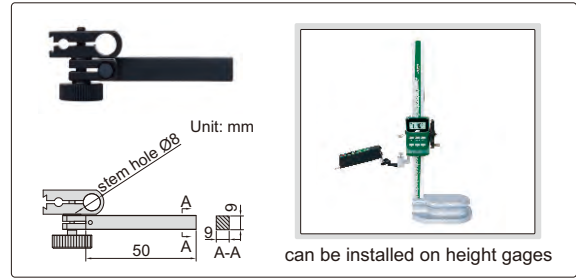
To be continued

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magnetic stand adapter (included)



dial test indicator holder (optional)



## SPECIFICATION

<b>Parameters</b>		Ra, Rq, Rt, Rz, Rc, Rmax, RSm, Rpc, Pt, R, AR, Rx, Ppc
<b>Range</b>	X axis	17.5mm
	Z axis	250µm
<b>Accuracy</b>		±(5%+0.025)µm
<b>Resolution (Ra)</b>		0.001µm
<b>Probe</b>	type	inductive
	stylus radius/angle	2µm/90°
	stylus material	diamond
<b>Measuring unit</b>		µm/µin
<b>Cut off</b>		0.25/0.8/2.5mm
<b>Number of cut-off</b>		1~5
<b>Moving speed</b>		0.5mm/s, 1mm/s
<b>Memory</b>		18000 measurements with only parameters, 30 measurements with graph
<b>Power</b>		built-in rechargeable battery
<b>Dimension (L×W×H)</b>		160×34×33.5mm
<b>Weight</b>		200g

## STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Standard probe</b>	1 pc
<b>Calibration block</b>	1 pc
<b>Adjustable stand</b>	1 pc
<b>Probe cover</b>	1 pc
<b>Magnetic stand adapter</b>	1 pc
<b>Software and USB cable</b>	1 pc
<b>AC/DC adapter</b>	1 pc

## OPTIONAL ACCESSORY

<b>Dial test indicator holder</b>	<b>6293-6</b>
<b>Groove probe</b>	<b>ISR-C200-SB21</b>
<b>Small hole probe</b>	<b>ISR-C200-SB31</b>
<b>Deep groove probe</b>	<b>ISR-C200-SB121</b>
<b>Extension rod</b>	<b>ISR-C200-ER50</b>
<b>Extension rod</b>	<b>ISR-C200-ER100</b>

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## SPECIFICATION OF PROBES

Unit: mm

<p><b>standard probe (included)</b></p> <p>measurement for plane surfaces, also transverse measurement for plane surfaces, cylinders and grooves</p>	<p><b>groove probe (optional), code ISR-C200-SB21</b></p> <p>measure plane surfaces and grooves</p>
<p><b>small hole probe (optional), code ISR-C200-SB31</b></p> <p>measure holes with diameter &gt; 4mm and depth &lt; 20mm</p>	<p><b>deep groove probe (optional), code ISR-C200-SB121</b></p> <p>measure grooves with depth &lt; 20mm</p>
<p><b>extension rod (optional), code ISR-C200-ER50</b></p> <p>for long holes</p>	<p><b>extension rod (optional), code ISR-C200-ER100</b></p> <p>for long holes</p>

BLUETOOTH

DATA OUTPUT

CAN BE OPERATED BY MOBILE PHONES OR COMPUTERS

# ROUGHNESS TESTER CODE ISR-C002



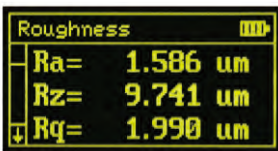
- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 21 roughness parameters
- Display roughness value, profile and curve
- Memory of maximum 100 results
- Automatic power off



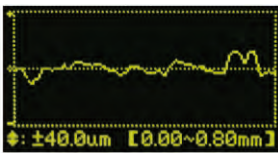
software CD (included)



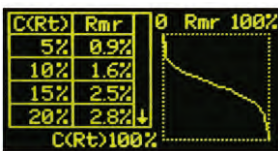
screen display



measurement result



roughness profile



Rmr analysis

probe cover (included)



put the small workpieces directly under the probe for measurement



adjustable stand (included)



operate roughness tester by mobile phones



connect to mobile phones via bluetooth (only Android system), display roughness values, profile and curve

operate roughness tester by computers



connect to computers via USB cable (software is included), display roughness values, profile and curve

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (optional)



via SPC cable

SPC cable (optional)



receiver (optional)



bluetooth printer (optional)



To be continued

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Unit: mm

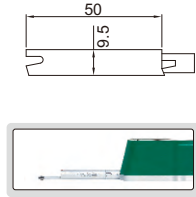
light duty test stand (optional)



heavy duty test stand (optional)



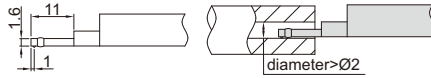
extension rod (optional), code ISR-C002-ER



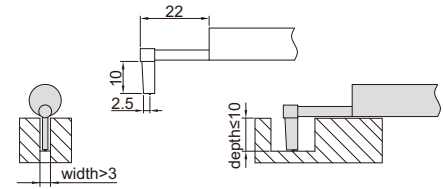
transverse rod (optional), code ISR-C002-TR



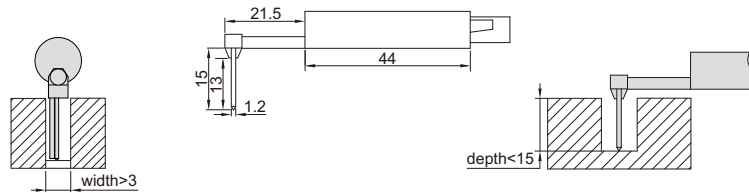
tiny hole probe (optional), code ISR-C002-SBP



deep groove probe (optional), code ISR-C002-DGP



deep groove probe (optional), code ISR-C002-DGP1



## SPECIFICATION

<b>Parameters</b>		Ra, Rz, Rq, Rv, Rp, RS, R3z, R3y, Rt, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry (JIS), Rmax
<b>Range</b>		160µm
<b>Accuracy</b>		±10%
<b>Resolution (Ra)</b>		0.001µm
<b>Probe</b>	<b>type</b>	inductive
	<b>stylus radius/angle</b>	5µm/90°
	<b>stylus material</b>	diamond
<b>Measuring force</b>		4mN
<b>Measuring unit</b>		µm/µin
<b>Cut off</b>		0.25/0.8/2.5mm
<b>Number of cut-off</b>		1 to 5
<b>Moving speed</b>		0.5mm/s, 1mm/s
<b>Memory</b>		100 measurement results
<b>Output</b>		bluetooth and USB
<b>Power</b>		built-in rechargeable battery
<b>Dimension (L×W×H)</b>		141×55×40mm
<b>Weight</b>		400g

## STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Standard probe</b>	1 pc
<b>Calibration block and support</b>	1 pc of each
<b>Adjustable stand</b>	1 pc
<b>Probe cover</b>	1 pc
<b>Software and USB cable</b>	1 pc
<b>AC/DC adapter</b>	1 pc

## OPTIONAL ACCESSORY

<b>Extension rod</b>	ISR-C002-ER
<b>Transverse rod</b>	ISR-C002-TR
<b>Tiny hole probe</b>	ISR-C002-SBP
<b>Deep groove probe</b>	ISR-C002-DGP
<b>Deep groove probe</b>	ISR-C002-DGP1*
<b>Light duty test stand</b>	ISR-C002-STAND1
<b>Heavy duty test stand</b>	ISR-C002-STAND
<b>Bluetooth printer</b>	ISR-C002-PRINTER
<b>Receiver</b>	ISR-C300-RECEIVER
<b>SPC cable</b>	ISR-C300-SPC

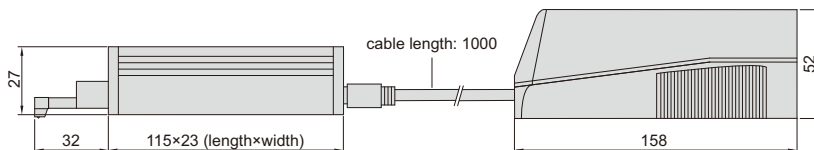
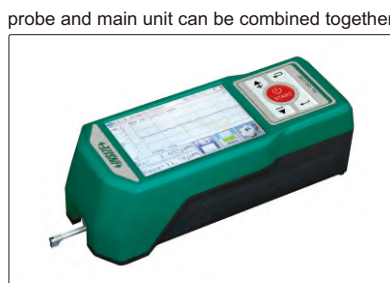
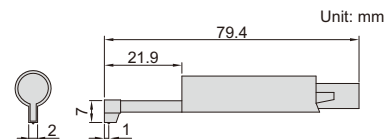
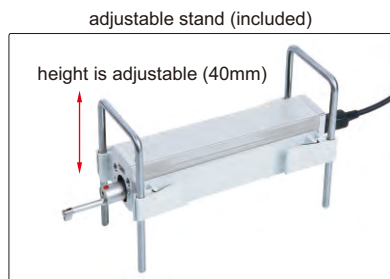
\*Need to be delivered with roughness tester ISR-C002

BLUETOOTH TOUCH SCREEN CAN BE OPERATED BY COMPUTERS OR MOBILE PHONES

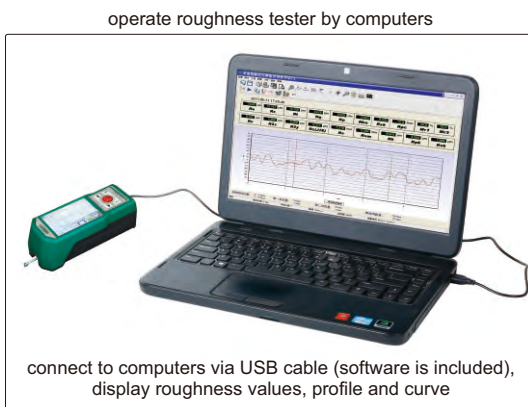
# ROUGHNESS TESTER (SEPARABLE TYPE) CODE ISR-C300

DATA OUTPUT

- Roughness tester can be operated by mobile phones (only Android system) or computers
- Data can be sent to Excel by connecting to computers via bluetooth or SPC cable
- Support bluetooth printer
- 22 roughness parameters
- Meet ISO, DIN, ANSI, JIS standards
- Display roughness values, profile and curve
- Memory of maximum 100 data and waveform
- Built-in lithium battery, working time more than 50 hours
- Touch screen
- Automatic power off



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roughness tester screen display

measurement result

Ra= 0.001 μm	Rz= 0.023 μm
Rq= 0.004 μm	Rt= 0.023 μm
Rp= 0.000 μm	Rv= 0.023 μm
R3z= 0.00 μm	R3y= 0.00 μm

roughness profile

Rmr analysis

C (Rt)	Rmr	0	100
5%	96.7%		
10%	96.7%		
15%	96.7%		
20%	96.7%		

data can be sent to Excel by connecting to computer via bluetooth or SPC cable

via bluetooth

receiver (optional)

via SPC cable

SPC cable (optional)

receiver (optional)

To be continued

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bluetooth printer (optional)



magnetic stand adapter (included)

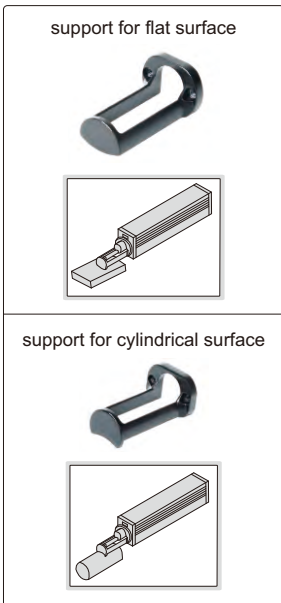


height gage adapter (optional)



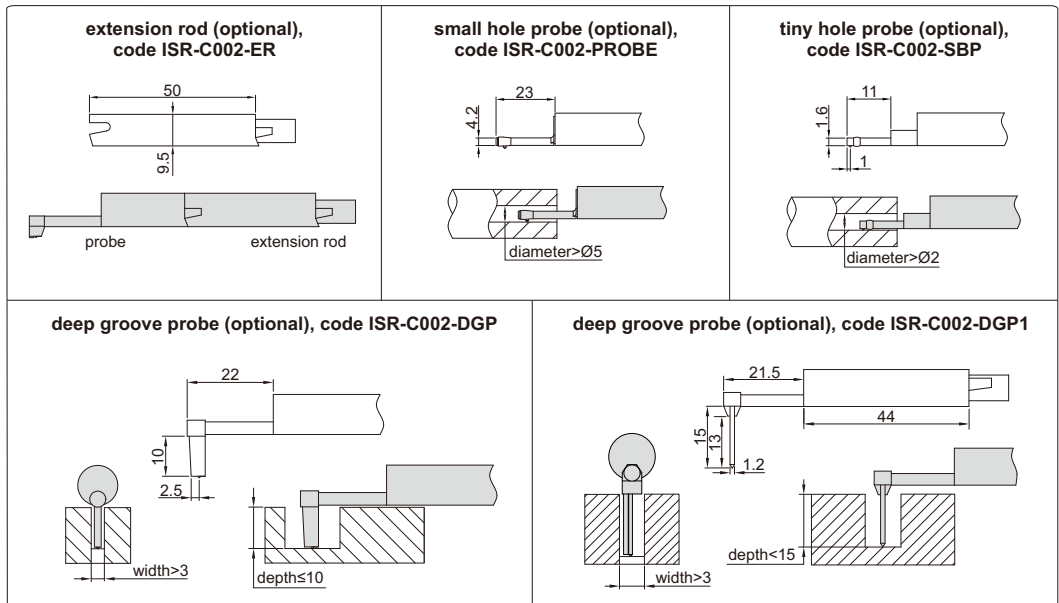
**NOTE:** Please check whether the adapter can fit your height gages. When using **INSIZE** height gages, please use the dial test indicator holder of height gages

probe support (optional)



optional probes

Unit: mm



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## SPECIFICATION

<b>Parameters</b>		Ra, Rz, Rq, Rv, Rp, Rs, R3z, R3y, Rt, Rc, Rz (JIS), Rk, Rku, Rsm, Rpc, Rpk, Rvk, Rsk, Mr1, Mr2, Ry, Rmax
<b>Range</b>	X axis	17.5mm
	Z axis	320µm (-160µm~160µm)
<b>Accuracy</b>		±10%
<b>Resolution (Ra)</b>		0.001µm
<b>Probe</b>	type	inductive
	stylus radius/angle	5µm/90°
	stylus material	diamond
<b>Measuring force</b>		4mN
<b>Measuring unit</b>		µm/µin
<b>Cut off</b>		0.25/0.8/2.5mm
<b>Number of cut-offs</b>		1~5
<b>Moving speed</b>		0.135mm/s, 0.5mm/s, 1mm/s
<b>Memory</b>		100 measurement results
<b>Output</b>		USB and bluetooth
<b>Power</b>		built-in rechargeable battery
<b>Dimension (L×W×H)</b>		158×64×52mm
<b>Weight</b>		400g

## STANDARD DELIVERY

Main unit	1 pc
Standard probe	1 pc
Calibration block and support	1 pc of each
Connecting cable (long and short)	1 pc of each
Magnetic stand adapter	1 pc
Adjustable stand	1 pc
Touch pen	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc

## OPTIONAL ACCESSORY

Extension rod	ISR-C002-ER
Small hole probe	ISR-C002-PROBE
Tiny hole probe	ISR-C002-SBP
Deep groove probe	ISR-C002-DGP
Deep groove probe	ISR-C002-DGP1*
Bluetooth printer	ISR-C002-PRINTER
Height gage adapter	ISR-C300-LB1
Receiver	ISR-C300-RECEIVER
SPC cable	ISR-C300-SPC
Support for flat surface	ISR-C300-COVER1
Support for cylindrical surface	ISR-C300-COVER2

\*Need to be delivered with roughness tester **ISR-C300**

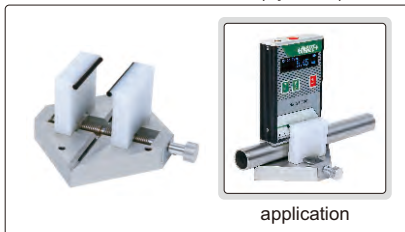
ATTENTION: THIS ROUGHNESS TESTER IS NOT SUITABLE FOR ROUGH TURNING, MILLING AND PLANING WORKPIECES

## ROUGHNESS TESTER (BASIC TYPE) CODE ISR-C003

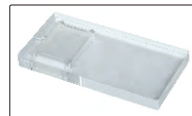
- Unit:  $\mu\text{m}$ ,  $\mu\text{in}$
- Automatic power off



fixture for small shafts (optional)



application



calibration block (included)

### OPTIONAL ACCESSORY

Fixture for small shafts

ISR-C003-FIXTURE

### SPECIFICATION

Parameters	Ra, Rz, Rq, Rt	
Range	Ra, Rq: 0.05~15 $\mu\text{m}$ Rz, Rt: 0.1~50 $\mu\text{m}$	
Accuracy	$\pm 10\%$	
Resolution (Ra)	0.01 $\mu\text{m}$	
Probe	type	piezoelectric
	stylus radius/angle	10 $\mu\text{m}/90^\circ$
	stylus material	diamond
Measuring force	5mN	
Measuring unit	$\mu\text{m}/\mu\text{in}$	
Cut off	0.25/0.8/2.5mm	
Evaluation length	1.25mm for cut off 0.25mm	
	4mm for cut off 0.8mm	
	5mm for cut off 2.5mm	
Moving speed	0.75mm/s	
Power	built-in rechargeable battery	
Dimension (L×W×H)	106×70×24mm	
Weight	200g	

### STANDARD DELIVERY

Main unit	1 pc
Calibration block	1 pc
AC/DC adapter	1 pc

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## SURFACE ROUGHNESS SPECIMEN SET CODE ISR-CS130-W

**INSIZE PLUS**  
MADE IN EUROPE

- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel



Machining method	Roughness (Ra)	Roughness (Rz)	Quantity
Flat lapping	0.05, 0.1, 0.2 $\mu\text{m}$	0.55, 1, 1.6 $\mu\text{m}$	3 pcs
	2, 4, 8 $\mu\text{in}$		
Reaming	0.4, 0.8, 1.6 $\mu\text{m}$	3, 6, 10 $\mu\text{m}$	3 pcs
	16, 32, 63 $\mu\text{in}$		
Plain grinding	0.05, 0.1, 0.2, 0.4, 0.8, 1.6 $\mu\text{m}$	0.55, 1, 1.6, 3, 6, 10 $\mu\text{m}$	6 pcs
	2, 4, 8, 16, 32, 63 $\mu\text{in}$		
Horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		
Vertical milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		
Turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5 $\mu\text{m}$	2.5, 4, 8, 16, 32, 50 $\mu\text{m}$	6 pcs
	16, 32, 63, 125, 250, 500 $\mu\text{in}$		

## SURFACE ROUGHNESS SPECIMENS

**INSIZE PLUS**  
MADE IN EUROPE



- For checking, identifying and specifying the roughness by symbol
- Rust-proof, made of pure Nickel

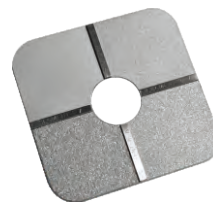
ISR-CS315

Code	Machining method	Roughness (Ra)	Roughness (Rz)	Quantity	
ISR-CS315	surface grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.29, 0.55, 0.91, 1.74, 2.6, 4.65, 7.87, 15.6µm	8 pcs	
ISR-CS316	cylindrical grinding	0.025, 0.05, 0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.3, 0.53, 0.88, 1.56, 2.64, 4.4, 7.71, 15.3µm	8 pcs	
ISR-CS317	flat lapping	criss-cross	0.025, 0.05, 0.1, 0.2µm	0.4, 0.6, 0.74, 1.26µm	4 pcs
		parallel	0.025, 0.05, 0.1, 0.2µm	0.34, 0.56, 1.12, 1.5µm	4 pcs
ISR-CS318	cylindrical lapping	0.025, 0.05, 0.1, 0.2µm	0.46, 0.54, 0.63, 1.23µm	4 pcs	
	superfinishing	0.025, 0.05, 0.1, 0.2µm	0.36, 0.7, 1, 1.4µm	4 pcs	
ISR-CS319	face turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.2, 6.15, 12.5, 23.7, 48.7, 102, 185µm	8 pcs	
ISR-CS320	cylindrical turning	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.7, 3.2, 6.1, 12.2, 23.7, 47.5, 95, 190µm	8 pcs	
ISR-CS321	end milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.92, 3.82, 6.45, 12.2, 25.2, 49.8, 92.6, 191µm	8 pcs	
ISR-CS322	reaming	0.4, 0.8, 1.6, 3.2µm	1.7, 3.2, 6.4, 12.8µm	4 pcs	
	drilling	1.6, 3.2, 6.3, 12.5µm	7.5, 15.5, 31, 60µm	4 pcs	
ISR-CS323	horizontal milling	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	1.8, 3.68, 6.63, 12.8, 25.6, 53, 97.5, 197µm	8 pcs	
ISR-CS325	shaping (planing)	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50, 100µm	3.84, 6.7, 12.2, 25.2, 48.7, 99.9, 190, 361µm	8 pcs	
ISR-CS326	linishing (belt sanding)	0.1, 0.2, 0.4, 0.8, 1.6, 3.2µm	0.9, 1.55, 3.37, 7.42, 18.5, 31µm	6 pcs	
ISR-CS328	vertical grinding	0.2, 0.4, 0.8, 1.6, 3.2, 6.3µm	1.1, 3.5, 6.15, 8.78, 22.19, 40.8µm	6 pcs	
ISR-CS329	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm	4 pcs	
	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm	4 pcs	
ISR-CS331	spark erosion (EDM)	0.4, 0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	2.5, 4.5, 7.2, 14.2, 24.7, 51.2, 105, 196µm	8 pcs	
ISR-CS333	hand filing	0.4, 0.8, 1.6, 3.2, 6.3µm	3, 5.6, 12.4, 22.5, 61µm	5 pcs	
ISR-CS334	castings	0.8, 1.6, 3.2, 6.3, 12.5, 25, 50µm	3.2, 8, 16, 32, 56, 112, 225µm	7 pcs	
ISR-CS335	honing	0.05, 0.1, 0.2, 0.4, 0.8, 1.6µm	0.31, 0.56, 1, 2, 4.2, 9µm	6 pcs	
ISR-CS336	polishing	0.0125, 0.025, 0.05, 0.1, 0.2µm	0.29, 0.35, 0.67, 0.72, 1.52µm	5 pcs	

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## SHOT AND GRIT BLASTING SURFACE ROUGHNESS SPECIMENS

**INSIZE PLUS**  
MADE IN EUROPE



- To check the roughness of steel surfaces which have been blast cleaned before painting
- Meets ISO 8503/1
- Rust-proof, made of pure Nickel
- Each piece contains 4 parts

ISR-CS017

Code	Machining method	Roughness (Ra)	Roughness (Rz)
ISR-CS017	shot blasting	3.2, 8, 13, 18µm	19.2, 48, 78, 108µm
ISR-CS018	grit blasting	3.2, 10.5, 18, 25µm	19.2, 63, 108, 150µm

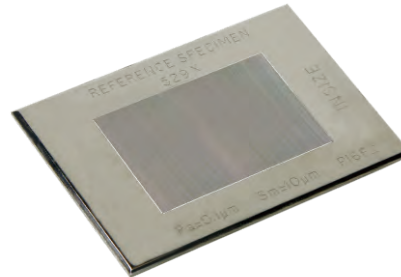


MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

## SURFACE ROUGHNESS REFERENCE SPECIMENS

**INSIZE PLUS**  
MADE IN EUROPE

- To calibrate roughness testers
- Meets ISO 5436-1: 2000
- Rust proof, made of pure Nickel



ISR-RS529X

Code	Roughness (Ra)
ISR-RS525X	6.25µm *
ISR-RS526X	3.15µm *
ISR-RS527X	3.0µm *
ISR-RS528X	0.5µm *
ISR-RS529X	0.1µm *
ISR-RS530X	1.0µm *
ISR-RS531X	0.3µm *

\*The actual value may be slightly different

MEASURING ACCURACY OF ROUGHNESS TESTERS CAN BE IMPROVED, IF THE CALIBRATION IS MADE ON A REFERENCE SPECIMEN WITH THE ROUGHNESS VALUE CLOSE TO THE WORKPIECE TO BE MEASURED

## SURFACE ROUGHNESS REFERENCE SPECIMENS

- To calibrate roughness testers
- Made of glass



ISR-LS603

Code	Roughness (Ra)
ISR-LS601	0.1µm *
ISR-LS602	0.2µm *
ISR-LS603	0.4µm *
ISR-LS604	0.8µm *
ISR-LS605	1.6µm *
ISR-LS606	3.2µm *
ISR-LS607	6.4µm *

\*The actual value may be slightly different